

regression analysis using spss

Regression Analysis Using SPSS: A Comprehensive Guide

Introduction:

Are you drowning in data and struggling to uncover meaningful relationships? Do you need to predict future outcomes based on past trends? If so, regression analysis is your answer. This comprehensive guide will equip you with the knowledge and practical skills to perform regression analysis using SPSS, one of the most popular statistical software packages. We'll walk you through the process step-by-step, from data preparation to interpreting the results, ensuring you can confidently analyze your data and draw meaningful conclusions. This guide is perfect for students, researchers, and anyone working with data who wants to master this powerful statistical technique. We'll cover everything from simple linear regression to multiple regression, offering clear explanations and practical examples along the way. Let's dive in!

1. Understanding Regression Analysis: The Basics

Regression analysis is a statistical method used to model the relationship between a dependent variable (the outcome you're interested in predicting) and one or more independent variables (predictors). The goal is to find the best-fitting line (or plane, in multiple regression) that describes this relationship. This line allows us to predict the value of the dependent variable based on the values of the independent variables. Simple linear regression involves one independent variable, while multiple regression involves two or more.

1. Preparing Your Data for SPSS

Before you even open SPSS, your data needs to be properly organized. This involves:

Data Cleaning: Identify and handle missing values (e.g., imputation, deletion). Outliers should be investigated as they can significantly influence your results.

Variable Types: Ensure your variables are correctly coded (e.g., numerical for continuous variables, categorical for nominal or ordinal variables).

Data Entry: Input your data accurately into an SPSS data file (.sav). Each row represents an observation, and each column represents a variable.

1. Performing Simple Linear Regression in SPSS

Let's walk through a simple example. Suppose you want to predict house prices (dependent variable) based on house size (independent variable).

Open your data in SPSS.

Go to Analyze > Regression > Linear.

Move your dependent variable (House Price) into the "Dependent" box and your independent variable (House Size) into the "Independent(s)" box.

Click "OK". SPSS will generate output containing key statistics, including the regression equation, R-squared, t-tests for coefficients, and ANOVA table.

1. Interpreting the Results of Simple Linear Regression

The key output elements to interpret include:

Regression Equation: This equation describes the relationship between the dependent and independent variables. For example, `House Price = a + b House Size`, where 'a' is the intercept and 'b' is the slope.

R-squared: This indicates the proportion of variance in the dependent variable explained by the independent variable. A higher R-squared indicates a better fit.

Coefficients: The 'b' coefficient (slope) represents the change in the dependent variable for a one-unit change in the independent variable. The 'a' coefficient (intercept) is the predicted value of the dependent variable when the independent variable is zero.

Significance Tests (t-tests and p-values): These determine the statistical significance of the relationship between variables. A p-value less than 0.05 typically indicates a statistically significant relationship.

1. Performing Multiple Regression in SPSS

Multiple regression extends the concept to include multiple independent variables. For example, you might want to predict house prices based on house size, location, and number of bedrooms. The process in SPSS is similar to simple linear regression, but you'll add multiple variables to the "Independent(s)" box.

1. Interpreting the Results of Multiple Regression

Interpreting multiple regression results requires careful consideration of:

Adjusted R-squared: This is a more accurate measure of the model's fit, particularly when multiple predictors are involved.

Partial regression coefficients: These show the independent effect of each predictor variable on the

dependent variable, holding other predictors constant.

Multicollinearity: This refers to high correlation between independent variables, which can affect the stability and interpretability of the coefficients. SPSS provides diagnostics to assess this.

1. Model Assumptions and Diagnostics

Regression analysis relies on several assumptions. SPSS provides tools to assess these assumptions:

Linearity: The relationship between variables should be linear. Scatterplots can help visualize this.

Independence of errors: Errors should be independent of each other.

Homoscedasticity: The variance of errors should be constant across all levels of the independent variables.

Normality of errors: Errors should be normally distributed.

Violation of these assumptions can affect the validity of your results. SPSS offers diagnostic tools like residual plots and tests for normality to check these assumptions.

1. Advanced Regression Techniques in SPSS

SPSS offers various advanced regression techniques:

Stepwise Regression: This method automatically selects the best subset of predictors.

Hierarchical Regression: This allows you to enter predictors in a specific order, testing their unique contributions.

Curvilinear Regression: This models non-linear relationships between variables.

Book Outline: Mastering Regression Analysis with SPSS

I. Introduction to Regression Analysis:

What is regression analysis?

Types of regression analysis (simple linear, multiple, etc.)

Applications of regression analysis in various fields

II. Preparing Data for Regression Analysis:

Data cleaning and preprocessing techniques

Handling missing values and outliers

Variable transformation and coding

III. Performing Regression Analysis in SPSS:

Step-by-step guide to running regression analysis in SPSS

Interpreting SPSS output

Understanding key statistical concepts (R-squared, p-values, etc.)

IV. Advanced Regression Techniques:

Stepwise, hierarchical, and curvilinear regression

Model diagnostics and assumption checking

Dealing with multicollinearity and other issues

V. Case Studies and Practical Applications:

Real-world examples of regression analysis

Applying learned techniques to solve problems

Interpreting and communicating results effectively

VI. Conclusion and Future Directions:

Summary of key concepts and techniques

Future trends and advancements in regression analysis

Resources for further learning

(The detailed explanation of each chapter would follow the structure and content presented earlier in the blog post, expanding on each point with more detail, examples, and illustrative SPSS screenshots.)

FAQs:

1. What is the difference between simple and multiple regression? Simple regression uses one predictor variable, while multiple regression uses two or more.
2. How do I handle missing data in SPSS before regression? You can use techniques like imputation (replacing missing values with estimated ones) or listwise deletion (excluding cases with missing values).
3. What is R-squared, and what does it tell me? R-squared indicates the proportion of variance in the dependent variable explained by the independent variables. A higher value suggests a better fit.
4. What is multicollinearity, and why is it a problem? Multicollinearity is high correlation between predictor variables, making it difficult to isolate their individual effects.
5. How do I interpret the coefficients in a regression equation? Coefficients represent the change in

the dependent variable associated with a one-unit change in the respective independent variable.

6. What are the key assumptions of regression analysis? Linearity, independence of errors, homoscedasticity, and normality of errors are key assumptions.
7. How can I check for violations of regression assumptions in SPSS? SPSS offers diagnostic tools like residual plots and normality tests.
8. What are some advanced regression techniques available in SPSS? Stepwise, hierarchical, and curvilinear regression are examples.
9. Where can I find more resources to learn about regression analysis? Numerous online tutorials, textbooks, and statistical courses are available.

Related Articles:

1. Interpreting Regression Coefficients in SPSS: A detailed guide to understanding the meaning and implications of regression coefficients.
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4. Stepwise Regression Analysis in SPSS: A step-by-step tutorial on performing and interpreting

stepwise regression.

5. Multiple Regression Analysis: A Beginner's Guide: An introduction to multiple regression for those new to the technique.
6. Curvilinear Regression Modeling Using SPSS: Explores the use of SPSS to model non-linear relationships.
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9. Comparing Regression Models: Model Selection Criteria: Examines different criteria for comparing and selecting the best regression model.

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Hadi, 2015-02-25 Praise for the Fourth Edition: This book is . . . an excellent source of examples for regression analysis. It has been and still is readily readable and understandable. —Journal of the American Statistical Association Regression analysis is a conceptually simple method for investigating relationships among variables. Carrying out a successful application of regression analysis, however, requires a balance of theoretical results, empirical rules, and subjective judgment. Regression Analysis by Example, Fifth Edition has been expanded and thoroughly updated to reflect recent advances in the field. The emphasis continues to be on exploratory data analysis rather than statistical theory. The book offers in-depth treatment of regression diagnostics, transformation, multicollinearity, logistic regression, and robust regression. The book now includes a new chapter on the detection and correction of multicollinearity, while also showcasing the use of the discussed methods on newly added data sets from the fields of engineering, medicine, and business. The Fifth Edition also explores additional topics, including: Surrogate ridge regression Fitting nonlinear models Errors in variables ANOVA for designed experiments Methods of regression analysis are clearly demonstrated, and examples containing the types of irregularities commonly encountered in the real world are provided. Each example isolates one or two techniques and features detailed discussions, the required assumptions, and the evaluated success of each technique. Additionally, methods described throughout the book can be carried out with most of the

currently available statistical software packages, such as the software package R. Regression Analysis by Example, Fifth Edition is suitable for anyone with an understanding of elementary statistics.

regression analysis using spss: Regression Analysis and Linear Models Richard B. Darlington, Andrew F. Hayes, 2016-08-22 Emphasizing conceptual understanding over mathematics, this user-friendly text introduces linear regression analysis to students and researchers across the social, behavioral, consumer, and health sciences. Coverage includes model construction and estimation, quantification and measurement of multivariate and partial associations, statistical control, group comparisons, moderation analysis, mediation and path analysis, and regression diagnostics, among other important topics. Engaging worked-through examples demonstrate each technique, accompanied by helpful advice and cautions. The use of SPSS, SAS, and STATA is emphasized, with an appendix on regression analysis using R. The companion website (www.afhayes.com) provides datasets for the book's examples as well as the RLM macro for SPSS and SAS. Pedagogical Features: *Chapters include SPSS, SAS, or STATA code pertinent to the analyses described, with each distinctively formatted for easy identification. *An appendix documents the RLM macro, which facilitates computations for estimating and probing interactions, dominance analysis, heteroscedasticity-consistent standard errors, and linear spline regression, among other analyses. *Students are guided to practice what they learn in each chapter using datasets provided online. *Addresses topics not usually covered, such as ways to measure a variable's importance, coding systems for representing categorical variables, causation, and myths about testing interaction.

regression analysis using spss: A Conceptual Guide to Statistics Using SPSS Elliot T. Berkman, Steven P. Reise, 2012 This book helps students develop a conceptual understanding of a variety of statistical tests by linking the statistics with the computational steps and output from SPSS. Learning how statistical ideas map onto computation in SPSS will help students build a better understanding of both. For example, seeing exactly how the concept of variance is used in SPSS-how it is converted into a number based on real data, which other concepts it is associated with, and where it appears in various statistical tests-will not only help students understand how to use statistical tests in SPSS and how to interpret their output, but will also teach them about the concept of variance itself. Each chapter begins with a student-friendly explanation of the concept behind each statistical test and how the test relates to that concept. The authors then walk through the steps to compute the test in SPSS and the output, pointing out wherever possible how the SPSS procedure and output connects back to the conceptual underpinnings of the test. Each of the steps is accompanied by annotated screen shots from SPSS, and relevant components of output are highlighted in both the text and in the figures. Sections explain the conceptual machinery underlying the statistical tests. In contrast to merely presenting the equations for computing the statistic, these sections describe the idea behind each test in plain language and help students make the connection between the ideas and SPSS procedures. These include extensive treatment of custom hypothesis testing in ANOVA, MANOVA, ANCOVA, and regression, and an entire chapter on the advanced matrix algebra functions available only through syntax in SPSS. The book will be appropriate for both advanced undergraduate and graduate level courses in statistics.

regression analysis using spss: A Quick and Easy Guide in Using SPSS for Linear Regression Analysis Jurex Gallo, 2019-08 This book is ideal for students and researchers who are new to SPSS and need a quick and easy guide in conducting linear regression analysis using the software. The book not only provides a step by step procedure in analyzing data using SPSS but also give insights on how to interpret results and incorporate the analysis into a research manuscript or report. This guide is helpful to researchers who are conducting research investigations in the field of education, psychology, sociology, engineering etc.

regression analysis using spss: Using SPSS for Windows Susan B. Gerber, Kristin Voelkl Finn, 2006-01-27 The second edition of this popular guide demonstrates the process of entering and analyzing data using the latest version of SPSS (12.0), and is also appropriate for those using earlier

versions of SPSS. The book is easy to follow because all procedures are outlined in a step-by-step format designed for the novice user. Students are introduced to the rationale of statistical tests and detailed explanations of results are given through clearly annotated examples of SPSS output. Topics covered range from descriptive statistics through multiple regression analysis. In addition, this guide includes topics not typically covered in other books such as probability theory, interaction effects in analysis of variance, factor analysis, and scale reliability. Chapter exercises reinforce the text examples and may be performed for further practice, for homework assignments, or in computer laboratory sessions. This book can be used in two ways: as a stand-alone manual for students wishing to learn data analysis techniques using SPSS for Windows, or in research and statistics courses to be used with a basic statistics text. The book provides hands-on experience with actual data sets, helps students choose appropriate statistical tests, illustrates the meaning of results, and provides exercises to be completed for further practice or as homework assignments. Susan B. Gerber, Ph.D. is Research Assistant Professor of Education at State University of New York at Buffalo. She is director of the Educational Technology program and holds degrees in Statistics and Educational Psychology. Kristin Voelkl Finn, Ph.D. is Assistant Professor of Education at Canisius College. She teaches graduate courses in research methodology and conducts research on adolescent problem behavior.

regression analysis using spss: Intermediate Statistics Using SPSS Herschel Knapp, 2017-09-14 What statistical test should I use for this kind of data? How do I set up the data? What parameters should I specify when ordering the test? How do I interpret the results? Herschel Knapp's friendly and approachable guide to real-world statistics answers these questions. Intermediate Statistics Using SPSS is not about abstract statistical theory or the derivation or memorization of statistical formulas—it is about applied statistics. With jargon-free language and clear processing instructions, this text covers the most common statistical functions—from basic to more advanced. Practical exercises at the conclusion of each chapter offer students an opportunity to process viable data sets, write cohesive abstracts in APA style, and build a thorough comprehension of the statistical process. Students will learn by doing with this truly practical approach to statistics.

regression analysis using spss: SPSS Statistics for Data Analysis and Visualization Keith McCormick, Jesus Salcedo, 2017-05-01 Dive deeper into SPSS Statistics for more efficient, accurate, and sophisticated data analysis and visualization SPSS Statistics for Data Analysis and Visualization goes beyond the basics of SPSS Statistics to show you advanced techniques that exploit the full capabilities of SPSS. The authors explain when and why to use each technique, and then walk you through the execution with a pragmatic, nuts and bolts example. Coverage includes extensive, in-depth discussion of advanced statistical techniques, data visualization, predictive analytics, and SPSS programming, including automation and integration with other languages like R and Python. You'll learn the best methods to power through an analysis, with more efficient, elegant, and accurate code. IBM SPSS Statistics is complex: true mastery requires a deep understanding of statistical theory, the user interface, and programming. Most users don't encounter all of the methods SPSS offers, leaving many little-known modules undiscovered. This book walks you through tools you may have never noticed, and shows you how they can be used to streamline your workflow and enable you to produce more accurate results. Conduct a more efficient and accurate analysis Display complex relationships and create better visualizations Model complex interactions and master predictive analytics Integrate R and Python with SPSS Statistics for more efficient, more powerful code These hidden tools can help you produce charts that simply wouldn't be possible any other way, and the support for other programming languages gives you better options for solving complex problems. If you're ready to take advantage of everything this powerful software package has to offer, SPSS Statistics for Data Analysis and Visualization is the expert-led training you need.

regression analysis using spss: Regression with Dummy Variables Melissa A. Hardy, 1993-02-25 It is often necessary for social scientists to study differences in groups, such as gender or race differences in attitudes, buying behavior, or socioeconomic characteristics. When the

researcher seeks to estimate group differences through the use of independent variables that are qualitative, dummy variables allow the researcher to represent information about group membership in quantitative terms without imposing unrealistic measurement assumptions on the categorical variables. Beginning with the simplest model, Hardy probes the use of dummy variable regression in increasingly complex specifications, exploring issues such as: interaction, heteroscedasticity, multiple comparisons and significance testing, the use of effects or contrast coding, testing for curvilinearity, and estimating a piecewise linear regression.

regression analysis using spss: Multivariate Methods and Forecasting with IBM® SPSS® Statistics Abdulkader Aljandali, 2017-07-06 This is the second of a two-part guide to quantitative analysis using the IBM SPSS Statistics software package; this volume focuses on multivariate statistical methods and advanced forecasting techniques. More often than not, regression models involve more than one independent variable. For example, forecasting methods are commonly applied to aggregates such as inflation rates, unemployment, exchange rates, etc., that have complex relationships with determining variables. This book introduces multivariate regression models and provides examples to help understand theory underpinning the model. The book presents the fundamentals of multivariate regression and then moves on to examine several related techniques that have application in business-orientated fields such as logistic and multinomial regression. Forecasting tools such as the Box-Jenkins approach to time series modeling are introduced, as well as exponential smoothing and naïve techniques. This part also covers hot topics such as Factor Analysis, Discriminant Analysis and Multidimensional Scaling (MDS).

regression analysis using spss: Multiple Regression and Beyond Timothy Z. Keith, 2019-01-14 Companion Website materials: <https://tzkeith.com/> Multiple Regression and Beyond offers a conceptually-oriented introduction to multiple regression (MR) analysis and structural equation modeling (SEM), along with analyses that flow naturally from those methods. By focusing on the concepts and purposes of MR and related methods, rather than the derivation and calculation of formulae, this book introduces material to students more clearly, and in a less threatening way. In addition to illuminating content necessary for coursework, the accessibility of this approach means students are more likely to be able to conduct research using MR or SEM--and more likely to use the methods wisely. This book: • Covers both MR and SEM, while explaining their relevance to one another • Includes path analysis, confirmatory factor analysis, and latent growth modeling • Makes extensive use of real-world research examples in the chapters and in the end-of-chapter exercises • Extensive use of figures and tables providing examples and illustrating key concepts and techniques New to this edition: • New chapter on mediation, moderation, and common cause • New chapter on the analysis of interactions with latent variables and multilevel SEM • Expanded coverage of advanced SEM techniques in chapters 18 through 22 • International case studies and examples • Updated instructor and student online resources

regression analysis using spss: Data Analysis with SPSS for Survey-based Research Saiyidi Mat Roni, Hadrian Geri Djajadikerta, 2021-06-21 This book is written for research students and early-career researchers to quickly and easily learn how to analyse data using SPSS. It follows commonly used logical steps in data analysis design for research. The book features SPSS screenshots to assist rapid acquisition of the techniques required to process their research data. Rather than using a conventional writing style to discuss fundamentals of statistics, this book focuses directly on the technical aspects of using SPSS to analyse data. This approach allows researchers and research students to spend more time on interpretations and discussions of SPSS outputs, rather than on the mundane task of actually processing their data.

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providing step by step procedures for performing your analysis, a detailed guide to interpreting data output and examples of how to present your results in a report. For both beginners and experienced users in psychology, sociology, health sciences, medicine, education, business and related disciplines, the SPSS Survival Manual is an essential text. Illustrated with screen grabs, examples of output and tips, it is supported by a website with sample data and guidelines on report writing. This seventh edition is fully revised and updated to accommodate changes to IBM SPSS Statistics procedures, screens and output. 'An excellent introduction to using SPSS for data analysis. It provides a self-contained resource itself, with more than simply (detailed and clear) step-by-step descriptions of statistical procedures in SPSS. There is also a wealth of tips and advice, and for each statistical technique a brief, but consistently reliable, explanation is provided.' - Associate Professor George Dunbar, University of Warwick 'This book is recommended as ESSENTIAL to all students completing research projects - minor and major.' - Dr John Roodenburg, Monash University A website with support materials for students and lecturers is available at www.spss.allenandunwin.com

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Applications Bayo Lawal, H. Bayo Lawal, 2003-10-17 This book covers the fundamental aspects of categorical data analysis with an emphasis on how to implement the models used in the book using SAS and SPSS. This is accomplished through the frequent use of examples, with relevant codes and instructions, that are closely related to the problems in the text. Concepts are explained in detail so that students can reproduce similar results on their own. Beginning with chapter two, exercises at the end of each chapter further strengthen students' understanding of the concepts by requiring them to apply some of the ideas expressed in the text in a more advanced capacity. Most of these exercises require intensive use of PC-based statistical software. Numerous tables with results of analyses, including interpretations of the results, further strengthen students' understanding of the material. Categorical Data Analysis With SAS(R) and SPSS Applications features: *detailed programs and outputs of all examples illustrated in the book using SAS(R) 8.02 and SPSS on the book's CD; *detailed coverage of topics often ignored in other books, such as one-way classification (ch. 3), the analysis of doubly classified data (ch. 11), and generalized estimating equations (ch. 12); and *coverage of SAS(R) PROC FREQ, GENMOD, LOGISTIC, PROBIT, and CATMOD, as well as SPSS PROC CROSSTABS, GENLOG, LOGLINEAR, PROBIT, LOGISTIC, NUMREG, and PLUM. This book is ideal for upper-level undergraduate or graduate-level courses on categorical data analysis taught in departments of biostatistics, statistics, epidemiology, psychology, sociology, political science, and education. A prerequisite of one year of calculus and statistics is recommended. The book has been class tested by graduate students in the department of biometry and epidemiology at the Medical University of South Carolina.

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variables Survival analysis t Test ANOVA and ANCOVA Multivariate group differences
Multidimensional scaling Cluster analysis Nonparametric procedures for frequency data Performing
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students in courses on social, behavioral, and health sciences as well as secondary education,
research design, and statistics. Also an excellent reference, the book is ideal for professionals and
researchers in the social, behavioral, and health sciences; applied statisticians; and practitioners
working in industry.

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Stehlik-Barry, Anthony J. Babinec, 2017-09-22 Master data management & analysis techniques with
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efficient statistical analysis of your data Choose the right statistical technique to analyze different
types of data and build efficient models from your data with ease Overcome any hurdle that you
might come across while learning the different SPSS Statistics concepts with clear instructions, tips
and tricks Who This Book Is For This book is designed for analysts and researchers who need to
work with data to discover meaningful patterns but do not have the time (or inclination) to become
programmers. We assume a foundational understanding of statistics such as one would learn in a
basic course or two on statistical techniques and methods. What You Will Learn Install and set up
SPSS to create a working environment for analytics Techniques for exploring data visually and
statistically, assessing data quality and addressing issues related to missing data How to import
different kinds of data and work with it Organize data for analytical purposes (create new data
elements, sampling, weighting, subsetting, and restructure your data) Discover basic relationships
among data elements (bivariate data patterns, differences in means, correlations) Explore
multivariate relationships Leverage the offerings to draw accurate insights from your research, and
benefit your decision-making In Detail SPSS Statistics is a software package used for logical batched
and non-batched statistical analysis. Analytical tools such as SPSS can readily provide even a novice
user with an overwhelming amount of information and a broad range of options for analyzing
patterns in the data. The journey starts with installing and configuring SPSS Statistics for first use
and exploring the data to understand its potential (as well as its limitations). Use the right statistical
analysis technique such as regression, classification and more, and analyze your data in the best
possible manner. Work with graphs and charts to visualize your findings. With this information in
hand, the discovery of patterns within the data can be undertaken. Finally, the high level objective of
developing predictive models that can be applied to other situations will be addressed. By the end of
this book, you will have a firm understanding of the various statistical analysis techniques offered by
SPSS Statistics, and be able to master its use for data analysis with ease. Style and approach
Provides a practical orientation to understanding a set of data and examining the key relationships
among the data elements. Shows useful visualizations to enhance understanding and interpretation.
Outlines a roadmap that focuses the process so decision regarding how to proceed can be made
easily.

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2012-12-13 This book provides readers with a greater understanding of a variety of statistical
techniques along with the procedure to use the most popular statistical software package SPSS. It
strengthens the intuitive understanding of the material, thereby increasing the ability to successfully
analyze data in the future. The book provides more control in the analysis of data so that readers can
apply the techniques to a broader spectrum of research problems. This book focuses on providing
readers with the knowledge and skills needed to carry out research in management, humanities,
social and behavioural sciences by using SPSS.

**regression analysis using spss: SPSS Data Analysis for Univariate, Bivariate, and Multivariate
Statistics** Daniel J. Denis, 2018-09-25 Enables readers to start doing actual data analysis fast for a
truly hands-on learning experience This concise and very easy-to-use primer introduces readers to a
host of computational tools useful for making sense out of data, whether that data come from the
social, behavioral, or natural sciences. The book places great emphasis on both data analysis and

drawing conclusions from empirical observations. It also provides formulas where needed in many places, while always remaining focused on concepts rather than mathematical abstraction. SPSS Data Analysis for Univariate, Bivariate, and Multivariate Statistics offers a variety of popular statistical analyses and data management tasks using SPSS that readers can immediately apply as needed for their own research, and emphasizes many helpful computational tools used in the discovery of empirical patterns. The book begins with a review of essential statistical principles before introducing readers to SPSS. The book then goes on to offer chapters on: Exploratory Data Analysis, Basic Statistics, and Visual Displays; Data Management in SPSS; Inferential Tests on Correlations, Counts, and Means; Power Analysis and Estimating Sample Size; Analysis of Variance – Fixed and Random Effects; Repeated Measures ANOVA; Simple and Multiple Linear Regression; Logistic Regression; Multivariate Analysis of Variance (MANOVA) and Discriminant Analysis; Principal Components Analysis; Exploratory Factor Analysis; and Non-Parametric Tests. This helpful resource allows readers to: Understand data analysis in practice rather than delving too deeply into abstract mathematical concepts Make use of computational tools used by data analysis professionals. Focus on real-world application to apply concepts from the book to actual research Assuming only minimal, prior knowledge of statistics, SPSS Data Analysis for Univariate, Bivariate, and Multivariate Statistics is an excellent “how-to” book for undergraduate and graduate students alike. This book is also a welcome resource for researchers and professionals who require a quick, go-to source for performing essential statistical analyses and data management tasks.

regression analysis using spss: Statistical Methods for the Social Sciences Alan Agresti, Barbara Finlay, 2013-07-30 The fourth edition has an even stronger emphasis on concepts and applications, with greater attention to real data both in the examples and exercises. The mathematics is still downplayed, in particular probability, which is all too often a stumbling block for students. On the other hand, the text is not a cookbook. Reliance on an overly simplistic recipe-based approach to statistics is not the route to good statistical practice. Changes in the Fourth Edition: Since the first edition, the increase in computer power coupled with the continued improvement and accessibility of statistical software has had a major impact on the way social scientists analyze data. Because of this, this book does not cover the traditional shortcut hand-computational formulas and approximations. The presentation of computationally complex methods, such as regression, emphasizes interpretation of software output rather than the formulas for performing the analysis. The text contains numerous sample printouts, mainly in the style of SPSS and occasionally SAS, both in chapter text and homework problems. This edition also has an appendix explaining how to apply SPSS and SAS to conduct the methods of each chapter and a website giving links to information about other software.

regression analysis using spss: The SAGE Handbook of Regression Analysis and Causal Inference Henning Best, Christof Wolf, 2013-12-20 ‘The editors of the new SAGE Handbook of Regression Analysis and Causal Inference have assembled a wide-ranging, high-quality, and timely collection of articles on topics of central importance to quantitative social research, many written by leaders in the field. Everyone engaged in statistical analysis of social-science data will find something of interest in this book.’ - John Fox, Professor, Department of Sociology, McMaster University ‘The authors do a great job in explaining the various statistical methods in a clear and simple way - focussing on fundamental understanding, interpretation of results, and practical application - yet being precise in their exposition.’ - Ben Jann, Executive Director, Institute of Sociology, University of Bern ‘Best and Wolf have put together a powerful collection, especially valuable in its separate discussions of uses for both cross-sectional and panel data analysis.’ -Tom Smith, Senior Fellow, NORC, University of Chicago Edited and written by a team of leading international social scientists, this Handbook provides a comprehensive introduction to multivariate methods. The Handbook focuses on regression analysis of cross-sectional and longitudinal data with an emphasis on causal analysis, thereby covering a large number of different techniques including selection models, complex samples, and regression discontinuities. Each Part starts with a non-mathematical introduction to the method covered in that section, giving readers a basic

knowledge of the method's logic, scope and unique features. Next, the mathematical and statistical basis of each method is presented along with advanced aspects. Using real-world data from the European Social Survey (ESS) and the Socio-Economic Panel (GSOEP), the book provides a comprehensive discussion of each method's application, making this an ideal text for PhD students and researchers embarking on their own data analysis.

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